PAC

Docket No.:

AVSI-0027 (108328.00161)

PATENT

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:

Ruxandra Draghia-Akli, et al.

Serial No.:

10/699,597

Filed:

October 30, 2003

Group:

1645

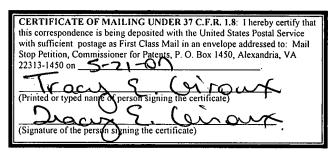
For:

SYNTHETIC MUSCLE PROMOTERS WITH ACTIVITIES EXCEEDING

NATURALLY OCCURRING REGULATORY SEQUENCES IN CARDIAC CELLS

Mail Stop: Petition Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:



#### RESPONSE TO NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (F) OR (G)

In response to the Notice of Abandonment Under 37 CRF 1.53 (F) or (G) mailed March 14, 2007, enclosed please find the following documents:

- 1. Petition to Withdraw a Holding of Abandonment Based on Failure to Receive an Office Action under 37 CRF §1.181(a);
- 2. Copy of Notice of Abandonment under 37 CFR 1.53(f) or (g) [Exhibit A];
- 3. Copy of Withdrawal of Previously Sent Notice/ Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures retrieved from the USPTO PAIR System [Exhibit B];
- 4. Statement from Practitioner in Support of Petition to Withdraw Holding of Abandonment Based on Failure to Receive Office Action;
- 5. Copy of docket record for Docket No. 108328.00161 [Exhibit C];
- 6. Amendment under 37 CFR §1.111;
- 7. Sequence Listing Statement Under 37 CFR §1.821(f);
- 8. Revised Sequence Listing on paper; and
- 9. Revised Sequence Listing on CD.

The commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 10-0096.

1

4646102v.2

Respectfully Submitted,

T. Ling Chwang Reg. No. 33,590

Jackson Walker L.L.P.

901 Main Street, Suite 6000

my May 21, 2007

Dallas, Texas 75202

Tel: (214) 953-5959 Fax: (214) 661-6870

4646102v.2

2

PATENT

Attorney Docket No.: AV61-2027 (108328.00161)

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Ruxandra Draghia-Akli, et al.

Serial No.:

10/699,597

Filed:

October 30, 2003

For:

SYNTHETIC MUSCLE PROMOTERS WITH ACTIVITIES EXCEEDING NATURALLY OCCURRING REGULATORY

SEQUENCES IN CARDIAC CELLS

Group No.:

1645

Examiner:

Kaushal, Sumesh

Mail Stop: Petition Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:

CERTIFICATE OF MAILING: I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on 5-21-01

(Printed or typed name of person signing the certificate)

(Signature of the person signing the certificate)

#### AMENDMENT UNDER 37 C.F.R. § 1.111

In response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequences and/or Amino Acid Sequence Disclosures dated July 6, 2006, please enter the enclosed Sequence Listing. In addition, please amend the above-identified patent application as follows. No new matter has been added.

4650453v.1 -1-

Attorney Docket No.: AVSI-0027 (108328.00161)

#### In the Sequence Listing:

Please replace the original Sequence Listing in the Specification with the replacement Sequence Listing as indicated on the Sequence Listing sheets (pages 1-24) that are part of the Statement under 37 C.F.R. §1.821(f) having the heading SEQUENCE LISTING:

#### In the Specification, please replace paragraphs [0005] and [0051] as follows:

Please amend Paragraph [0005] and Paragraph [0051] as follows. Certain original text contains underlining in the nucleotide sequence and this amendment simply adds of sequence identifiers. No new matter has been added.

#### Paragraph [0005]

[0005] The molecular mechanisms controlling cardiac-specific gene transcription requires the dissection of the cis-elements that govern the complex spatio-temporal expression of these genes. The vertebrate heart is formed during fetal development following a series of complex morphogenetic events that require the functional presence of different proteins, tightly regulated by combinatorial interactions of several transcription factors and their cofactors (Nemer and Nemer, 2001; Wang et al., 2001). First, the proximal serum response element (SRE) ('5-CC[A/T]6GG-3'), SEQ ID NO:23, of the skeletal α-actin promoter was incorporated. Multiple SREs are found in the cardiac, skeletal and smooth muscle α-actin promoters (Chang et al., 2001), and in the promoters of myosin light chain and dystrophin (Bergsma et al., 1986; Carroll et al., 1986). This cis-element is recognized by the trans-acting serum response factor (SRF), and by the competitive inhibitor YY1 (Chow and Schwartz, 1990; Lee et al., 1992; Minty and Kedes, 1986). Serum response factor (SRF) is a key regulator of a number of extracellular signal-regulated genes important for cell growth and differentiation (Zhang et al., 2001). Mutations in the proximal SRE that block SRF binding abolish skeletal α-actin promoter (SK) activity, indicating a fundamental role for this promoter element. Second, MEF-2 sites ('5-[C/T]TAAAAATAAC[C/T]3-3'), SEQ ID NO: 24, that have been found in

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the promoter/enhancer regions of the myosin light-chain 3 gene were selected. A single MEF-2 site lacks enhancer activity, but has multiple copies that exhibit strong enhancer activity (Gossett et al., 1989). Mutation of the MEF2 site severely reduced promoter activity in embryos, underlining the importance of MEF2 in controlling differentiation in all muscle lineages (Kelly et al., 2002). Third, the MEF-1 sites ('5-CANNTG-3'), or E-boxes that are found in the upstream regulatory region of most, if not all, muscle-specific genes were included (Olson et al., 1991; Weintraub et al., 1990). MEF-1 sites are recognized by the basic helix-loop-helix (bHLH) family of proteins. Multiple MEF-1 sites placed upstream of basal non-muscle promoters are sufficient to direct muscle-specific expression and MyoD-mediated trans-activation in transient assays (Lassar et al., 1991; Weintraub et al., 1990). Finally, the highly conserved muscle-CAT motif, or TEF-1 binding site ('5-CATTCCT-3') was selected. TEF-1 mediates both muscle-specific (SK, cardiac troponin T, cardiac α- and β-myosin heavy chain) and non-muscle specific transcription (simian virus 40 promoter) (Larkin et al., 1996; Stewart et al., 1994).

#### Paragraph [0051]

[0051] Different combination of SRE, MEF-1, MEF-2 and TEF-1 were then ligated in a total volume of 100μl using different molar ratio (Figure 1), maintaining a constant total amount of oligonucleotide of 200 pmoles. The core motif of each regulatory element (underlined) was flanked by adjacent sequence so that the binding sites of the regulatory elements would face the same side of the DNA helix when assembled together. The ligation reaction was completed with T4 ligase in 150μl. After ligation, the combination of elements was run on a 6% acrylamide gel. The 75-300-bp region was cut and eluted in 2 volumes of diffusion buffer at 37 °C overnight. The DNA was extracted using Qiaex II Gel Extraction Kit (Qiagen Inc., Chatsworth, CA, USA) and incubated in 150μl with phosphorylated and annealed Sp1 element (2.5 nmoles) and 10U of T4 ligase at 16 °C overnight. Since each of the Sp1 elements ('5-CCGTCCGCCCTCGG-3'), SEQ ID NO: 25, contains EagI half at both ends, an intact EagI restriction site was generated wherever two Sp1 elements were ligated together. The reaction was cleaned up (Qiaquick Nucleotide Removal Kit), digested with EagI and cloned into the EagI site of SK144GL-2 luciferase reporter construct, which resulted in a

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Attorney Docket No.: AVSI-0027 (108328.00161)

**PATENT** 

library of randomized synthetic-promoter-recombinants that were operatively linked to a reporter gene. The clones that gave the best results in the transfection studies were sequenced automatically.

#### **REMARKS**

Applicants have amended the Sequence Listing to contain sequence identifiers for each of the sequences disclosed on page 4, lines 3 and 12, and page 18, line 17, of the Specification. Additionally, Applicants have enclosed replacement copies of the Sequence Listing in both paper and electronic format. The replacement copies contain a Statement under 37 C.F.R. §1.821 indicating that the paper and electronic copies are identical.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully submitted,

T. Ling Chwang

Registration No. 33,590

JACKSON WALKER L.L.P.

901 Main Street, Suite 6000

Dallas, Texas 75202

Tel: (214) 953-5959

Fax: (214) 661-6870

May 21, 2007

Date

Docket No. AVSI-0027 (108328.00161)

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Ruxandra Draghia-Akli, et al.

Serial No.:

10/699,597

Filing Date:

October 30, 2003

For:

SYNTHETIC MUSCLE PROMOTERS WITH ACTIVITIES EXCEEDING NATURALLY OCCURRING REGULATORY SEQUENCES IN CARDIAC

**CELLS** 

## <u>PETITION TO WITHDRAW HOLDING OF ABANDONMENT BASED ON FAILURE TO</u> <u>RECEIVE OFFICE ACTION UNDER 37 CFR 1.181(A)</u>

Mail Stop: Petition Commissioner for Patents P. O. Box 1450 Alexandria, Virginia 22313-1450 CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8: I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents P. O. Box 1450, Alexandria, VA 22313-1450 on

(Printed or typed name of person signing the certificate)

(Signature of the person signing the certificate)

Dear Sir:

Applicants, through their undersigned attorney, the Practitioner, hereby petition the U.S. Patent and Trademark Office ("USPTO") to withdraw the holding of abandonment in this application. A Notice of Abandonment, mailed March 14, 2007 [Exhibit A], was received by the Practitioner on March 16, 2007. A subsequent review of the file history in the USPTO Patent Application Information Retrieval System revealed a Withdrawal of Previously Sent Notice/Notice to Comply With Requirements for Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures ("Withdrawal of Previously Sent Notice") was supposedly mailed on July 6, 2006 [Exhibit B]. This Withdrawal of Previously Sent Notice had never been received by the Practitioner. Applicants respectfully request that, since the Withdrawal of Previously Sent Notice was not received by the Practitioner, the Notice of Abandonment be withdrawn.

Docket No. AVSI-0027 (108328.00161)

The following documents are attached in support of this petition:

- 1. Statement From Practitioner in Support of Petition to Withdraw Holding of Abandonment Based on Failure to Receive Office Action; and
- Copy of docket record for Docket No. 108328.00161 [Exhibit C] showing no evidence of a
  Withdrawal of Previously Sent Notice being received by the Practitioner or a Response having
  been docketed at any time surrounding the deadline for response of August 6, 2006.

Applicants respectfully request that this Petition be granted.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 10-0096.

Any inquiries regarding this correspondence may be directed to the undersigned at the address or telephone number shown below.

Respectfully submitted,

T. Ling Chwang Reg. No. 33,590

May 21, 2007

Jackson Walker L.L.P. 901 Main Street, Suite 6000 Dallas, Texas 75202

Tel: (214) 953-5959 Fax: (214) 661-6870

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Ruxandra Draghia-Akli, et al.

Serial No.:

10/699,597

Filed:

October 30, 2003

For:

SYNTHETIC MUSCLE PROMOTERS WITH ACTIVITIES

**EXCEEDING NATURALLY OCCURRING REGULATORY** 

SEQUENCES IN CARDIAC CELLS

Art Unit:

1645

Examiner:

Kaushal, Sumesh

Mail Stop: Petition

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8: I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA

(Signature of the person signing the certificate)

#### STATEMENT UNDER 37 C.F.R. § 1.821 (F)

I hereby state that the content of the paper and computer readable copies of the Sequence Listing, submitted in accordance with 37 C.F.R. § 1.821 (e), § 1.821 (f), § 1.821 (g), § 1.825 (b) or § 1.825 (d) respectively, are the same. I also state that the paper and computer readable copies of the Sequence Listing submitted herewith contain no new matter.

Respectfully submitted,

T. Ling Chwang Reg. No. 33,590

Date: May 21, 2007

JACKSON WALKER L.L.P. 901 Main Street, Suite 6000

Dallas, TX 75202 Tel: 214-953-5959 Fax: 214-661-6870



1		
	SEQUENCE LISTING	
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	·	
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                                                                     120
aaaataactc ccgggagtta tttttagagc ggaggaatgg tggacaccca aatatggcga
                                                                     180
                                                                     240
eggtteetea eeegtegeea tatttgggtg teegeeeteg geeggggeeg catteetggg
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ī - t

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<210> 8

<211> 3534

<212> DNA

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<210> 9

<211> 3534

<212> DNA

<213> artificial sequence

<220>

<223> Nucleic acid sequence for the TV-GHRH plasmid.

<400> 9

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<sup>&</sup>lt;210> 10 <211> 3534

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> artificial sequence

<sup>&</sup>lt;220>

<sup>&</sup>lt;223> Nucleic acid sequence for the 15/27/28 GHRH plasmid.

<sup>&</sup>lt;400> 10
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60

<sup>&</sup>lt;210> 11

<sup>&</sup>lt;211> 2710

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> artificial sequence

<sup>&</sup>lt;220>

<sup>&</sup>lt;223> Vector with a mouse codon optimized GHRH analog sequence

<sup>&</sup>lt;400> 11

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<210> 12

<211> 2713

<212> DNA

<213> artificial sequence

<220>

<223> Vector with a rat codon optimized GHRH analog sequence

<400> 12

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660 gatcatgaac aggcagcagg gcgagaggaa ccaggagcag aggagcaggt tcaactgata 720 agettategg ggtggcatec etgtgacece tecceagtge eteteetgge cetggaagtt 780 gccactccag tgcccaccag ccttgtccta ataaaattaa gttgcatcat tttgtctgac 840 taggtgtcct tctataatat tatggggtgg aggggggtgg tatggagcaa ggggcaagtt 900 gggaagacaa cctgtagggc tcgagggggg gcccggtacc agcttttgtt ccctttagtg 960 agggttaatt tegagettgg tetteegett cetegeteae tgaetegetg egeteggteg 1020 ttcggctgcg gcgagcggta tcagctcact caaaggcggt aatacggtta tccacagaat 1080 caggggataa cgcaggaaag aacatgtgag caaaaaggcca gcaaaaggcc aggaaccgta 1140 aaaaggccgc gttgctggcg tttttccata ggctccgccc ccctgacgag catcacaaaa atcgacgctc aagtcagagg tggcgaaacc cgacaggact ataaagatac caggcgtttc 1200 cccctggaag ctccctcgtg cgctctcctg ttccgaccct gccgcttacc ggatacctgt 1260 1320 ccgcctttct cccttcggga agcgtggcgc tttctcatag ctcacgctgt aggtatctca 1380 gtteggtgta ggtegttege tecaagetgg getgtgtgea egaaceeece gtteageeeg 1440 accgctgcgc cttatccggt aactatcgtc ttgagtccaa cccggtaaga cacgacttat cgccactggc agcagccact ggtaacagga ttagcagagc gaggtatgta ggcggtgcta 1500 cagagttett gaagtggtgg cetaactacg getacactag aagaacagta tttggtatet 1560 1620 gegetetget gaageeagtt acetteggaa aaagagttgg tagetettga teeggeaaae 1680 aaaccaccgc tggtagcggt ggtttttttg tttgcaagca gcagattacg cgcagaaaaa 1740 aaggatetea agaagateet ttgatetttt etaegggget agegettaga agaaeteate 1800 cagcagacgg tagaatgcaa tacgttgaga gtctggagct gcaataccat acagaaccag 1860 gaaacggtca gcccattcac cacccagttc ctctgcaatg tcacgggtag ccagtgcaat gtcctggtaa cggtctgcaa cacccagacg accacagtca atgaaaccag agaaacgacc 1920 atteteaace atgatgtteg geaggeatge ateaceatga gtaactacea ggteeteace 1980 2040 atcoggcata cgagctttca gacgtgcaaa cagttcagcc ggtgccagac cctgatgttc 2100 ctcatccagg tcatcctggt caaccagacc tgcttccata cgggtacgag cacgttcaat 2160 acgatgtttt gcctggtggt caaacggaca ggtagctggg tccagggtgt gcagacgacg 2220 cattgcatca gccatgatag aaactttctc tgccggagcc aggtgagaag acagcaggtc 2280 ctgacccgga acttcaccca gcagcagcca gtcacgacca gcttcagtaa ctacatccag aactgcagca cacggaacac cagtggttgc cagccaagac agacgagctg cttcatcctg 2340 cagttcattc agagcaccag acaggtcagt tttaacaaac agaactggac gaccctgtgc 2400

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tggcggcaag	aaagccatcc	agtttacttt	gcagggcttc	ccaaccttac	cagagggcgc	2640
cccagctggc	aattccggtt	cgcttgctgt	ccataaaacc	gcccagtcta	gcaactgttg	2700
ggaagggcga	tcg					2713

<210> 13 <211> 2704

<212> DNA

<213> artificial sequence

<220>

<223> Vector with a bovine codon optimized GHRH analog sequence

<400> 13

60 tgtaatacga ctcactatag ggcgaattgg agctccaccg cggtggcggc cgtccgccct cggcaccatc ctcacgacac ccaaatatgg cgacgggtga ggaatggtgg ggagttattt 120 180 ttagageggt gaggaaggtg ggcaggeage aggtgttgge getetaaaaa taacteeegg 240 gagttatttt tagageggag gaatggtgga caeccaaata tggegaeggt teeteaeeeg 300 tegecatatt tgggtgteeg eecteggeeg gggeegeatt eetgggggee gggeggtget 360 cccgcccgcc tcgataaaag gctccggggc cggcggcggc ccacgagcta cccggaggag cgggaggcgc caagcggatc ccaaggccca actccccgaa ccactcaggg tcctgtggac 420 480 ageteaceta getgecatgg tgetgtgggt gttetteetg gtgaecetga eeetgageag 540 cggctcccac ggctccctgc cctcccagcc tctgcgcatc cctcgctacg ccgacgccat 600 cttcaccaac agctaccgca aggtgctcgg ccagctcagc gcccgcaagc tcctgcagga catcatgaac cggcagcagg gcgagcgcaa ccaggagcag ggagcctgat aagcttatcg 660 720 gggtggcatc cctgtgaccc ctccccagtg cctctcctgg ccctggaagt tgccactcca 780 gtgcccacca gccttgtcct aataaaatta agttgcatca ttttgtctga ctaggtgtcc 840 ttctataata ttatggggtg gagggggtg gtatggagca aggggcaagt tgggaagaca acctgtaggg ctcgaggggg ggcccggtac cagcttttgt tccctttagt gagggttaat 900 960 ttcgagettg gtetteeget teetegetea etgaeteget gegeteggte gtteggetge 1020 ggcgagcggt atcagctcac tcaaaggcgg taatacggtt atccacagaa tcaggggata 1080 acgcaggaaa gaacatgtga gcaaaaggcc agcaaaaggc caggaaccgt aaaaaggccg 1140 cgttgctggc gtttttccat aggctccgcc cccctgacga gcatcacaaa aatcgacgct

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gaaagccatc	cagtttactt	tgcagggctt	cccaacctta	ccagagggcg	ccccagctgg	2640
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atcg						2704

<sup>&</sup>lt;210> 14 <211> 2704 <212> DNA <213> artificial sequence

<220> <223> Vector with a ovine codon optimized GHRH analog sequence	
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ttagageggt gaggaaggtg ggeaggeage aggtgttgge getetaaaaa taacteeegg	180
gagttatttt tagageggag gaatggtgga cacccaaata tggegaeggt teetcaceeg	240
tegecatatt tgggtgteeg eeeteggeeg gggeegeatt eetgggggee gggeggtget	300
cccgcccgcc tcgataaaag gctccggggc cggcggcggc ccacgagcta cccggaggag	360
cgggaggcgc caagcggatc ccaaggccca actccccgaa ccactcaggg tcctgtggac	420
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cggaagccac ggcagcctgc ccagccagcc cctgaggatc cctaggtacg ccgacgccat	540
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catcatgaac aggcagcagg gcgagaggaa ccaggagcag ggcgcctgat aagcttatcg	660
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atcg					2704

<210> 15

<211> 2713

<212> DNA

<213> artificial sequence

<220>

<223> Vector with a chicken codon optimized GHRH analog sequence

<400> 15

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ttagagcggt gaggaaggtg ggcaggcagc aggtgttggc gctctaaaaa taactcccgg 180
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cccgcccgcc tcgataaaag gctccggggc cggcggcgc ccacgagcta cccggaggag 360
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ggaagggcga tcg	2713							
<pre>&lt;210&gt; 16 &lt;211&gt; 382 &lt;212&gt; DNA &lt;213&gt; artificial sequence &lt;220&gt; &lt;223&gt; This is the synthetic promoter c1-26.</pre>								
<400> 16 ggcggccgag ggcggggg caggcagcag gtgttggcac cattecteac cgctctaaaa	60							
ataactcccg tgaggaatgg tgccgtcgcc atatttgggt gtcgacaccc aaatatggcg	120							
acgggtgagg aatggtgggc aggcagcagg tgttgggaca cccaaatatg gcgacggcca	180							
acacctgctg cctgccggga gttattttta gagcggggag ttatttttag agcggtgagg	240							
aatggtggac acccaaatat ggcgacggcc ggggccgcat teetgggggc egggeggtgc	300							
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gcgggaggcg ccaagctcta ga	382							
<pre>&lt;210&gt; 17 &lt;211&gt; 218 &lt;212&gt; DNA &lt;213&gt; artificial sequence &lt;220&gt; &lt;223&gt; This is the synthetic promoter sequence for c2-26.</pre>								
<400> 17 cggccgtcgc catatttggg tgtccgctct aaaaataact cccgacaccc aaatatggcg	60							
acggggcagg cagcaggtgt tgggacaccc aaatatggcg acggccgggg ccgcattcct	120							
gggggccggg cggtgctccc gcccgcctcg ataaaaggct ccgggggccgg cggcggccca	180							
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<210> 18
<211> 230
<212> DNA
<213> artificial sequence
<220>
<223> This is the synthetic sequence for c2-27.
<400> 18
cggccgtcgc catatttggg tgtcggcagg cagcaggtgt tggcaccatt cctcacccgt
                                                                      60
cgccatattt gggtgtcggc aggcagcagt gttgggacac ccaaatatgg cgacggccgg
                                                                     120
ggccgcattc ctgggggccg ggcggtgctc ccgcccgcct cgataaaagg ctccggggcc
                                                                     180
ggcggcggcc cacgagctac ccggaggagc gggaggcgcc aagctctaga
                                                                     230
<210> 19
<211> 231
<212> DNA
<213> artificial sequence
<220>
<223> This is the synthetic promoter for c5-5.
<400> 19
cggccgtccg ccctcgggac acccaaatat ggcgacgggt gaggaatggt gcaccattcc
                                                                     60
tcacqqqaqt tatttttaga gcggtgagga atggtggaca cccaaatatg gcgacggccg
                                                                    120
                                                                    180
gggccgcatt cctgggggcc gggcggtgct cccgcccgcc tcgataaaag gctccggggc
cggcggcggc ccacgagcta cccggaggag cgggaggcgc caagctctag a
                                                                     231
<210> 20
<211> 255
<212> DNA
<213> artificial sequence
<220>
<223> This is the synthetic promter for c6-5.
<400> 20
                                                                     60
eggeegtege catatttggg tgteecaaca cetgetgeet geeegtege catatttggt
gtcggcaggc agcaggtgtt ggccaacacc tgctgcctgc cgggagttat ttttagagcg
                                                                     120
                                                                     180
gacacccaaa tatggegacg geeggggeeg catteetggg ggeegggegg tgeteeegee
                                                                    240
cgcctcgata aaaggctccg gggccggcgg cggcccacga gctacccgga ggagcgggag
                                                                     255
gcgccaagct ctaga
<210> 21
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<211> 283

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<212> DNA
<213> artificial sequence
<220>
      This is the synthetic promoter for c6-16.
<223>
<400> 21
cggccgtcgc catatttggg tgtccgctct aaaaataact cccccaacac ctgctgcctg
                                                                     60
ccccgtcgcc atatttgggt gtcggcaggc agcaggtgtt ggccaacacc tgctgcctgc
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cccaacact gctgcctgcc ccgtcgccat atttggtgtc cgccctcggc cggggccgca
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                                                                    240
gcccacgagc tacccggagg agcgggaggc gccaagctct aga
                                                                    283
<210> 22
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                                                                    120
gccatatttg ggtgtcggca ggcagcaggt gttgggggag ttatttttag agcgccgtcg
                                                                    180
ccatatttgg gtgtcccgag ggcggacggc cggggccgca ttcctggggg ccgggcggtg
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agcgggaggc gccaagctct aga
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<223> Sp1 element

<400> 25

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14



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office S: COMMISSIONER FOR PATENTS

P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER FILING OR 371(C) DATE FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE

10/699,597 10/30/2003

Ruxandra Draghia-Akli 108328.00161 (AVSI-0027)

> **CONFIRMATION NO. 7762** ABANDONMENT/TERMINATION LETTER

25555 JACKSON WALKER LLP 901 MAIN STREET **SUITE 6000** DALLAS, TX 75202-3797

Date Mailed: 03/14/2007

#### NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (f) OR (g)

The above-identified application is abandoned for failure to timely or properly reply to the Notice to File Missing Parts (Notice) mailed on 07/06/2006.

No reply was received.

If a complete reply to the notice was previously filed by applicant within the time period set forth in the notice, applicant may request for reconsideration of the holding of abandonment within 2 months from the mailing of this notice of abandonment by filing a petition to withdraw the holding of abandonment under 37 CFR 1.181(a). No petition fee is required. The petition must be accompanied by a true copy of the originally filed reply and the item (s) identified in one of the following:

- 1. A properly itemized date-stamped postcard receipt (see MPEP § 503);
- 2. If the originally filed reply included a certificate of mailing or transmission in compliance with 37 CFR 1.8(a), a copy of the certificate of mailing or transmission and a statement in compliance with 37 CFR 1.8(b) (see MPEP § 512); or
- 3. If the reply was filed via Express Mail, a submission satisfying the requirements of 37 CFR 1.10(e) including, for example, a copy of the Express Mail mailing label showing the "date-in" (see MPEP § 513).

Any petition to withdraw the holding of abandonment should be directed to OIPE.

If applicant did not previously file a complete reply within the time period set forth in the notice, applicant may file a petition to revive the application under 37 CFR 1.137.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of **UNAVOIDABLE DELAY** must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by: (1) an adequate showing of the cause of unavoidable delay; (2) the required reply to the aboveidentified Notice; (3) the petition fee set forth in 37 CFR 1.17(I); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/61.

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of **UNINTENTIONAL** DELAY must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by: (1) a statement that the entire delay was unintentional; (2) the required reply to the above-

MAR 1 6 2007

identified Notice; (3) the petition fee set forth in 37 CFR 1.17(m); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/64.

Any questions concerning petitions to revive should be directed to the "Office of Petitions" at (571) 272-3282.

A copy of this notice MUST be returned with the reply.

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199
PART 1 - ATTORNEY/APPLICANT COPY



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER FILING OR 371(C) DATE FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE

10/699,597 10/30/2003 Ruxandra Draghia-Akli 108328.00161 (AVSI-0027)

CONFIDMATION NO 776

CONFIRMATION NO. 7762
ABANDONMENT/TERMINATION
LETTER

25555 JACKSON WALKER LLP 901 MAIN STREET SUITE 6000 DALLAS, TX 75202-3797

Date Mailed: 03/14/2007

#### NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (f) OR (g)

The above-identified application is abandoned for failure to timely or properly reply to the Notice to File Missing Parts (Notice) mailed on 07/06/2006.

No reply was received.

If a complete reply to the notice was previously filed by applicant within the time period set forth in the notice, applicant may request for reconsideration of the holding of abandonment within 2 months from the mailing of this notice of abandonment by filing a petition to withdraw the holding of abandonment under 37 CFR 1.181(a). No petition fee is required. The petition must be accompanied by a true copy of the originally filed reply and the item (s) identified in one of the following:

- 1. A properly itemized date-stamped postcard receipt (see MPEP § 503);
- 2. If the originally filed reply included a certificate of mailing or transmission in compliance with 37 CFR 1.8(a), a copy of the certificate of mailing or transmission and a statement in compliance with 37 CFR 1.8(b) (see MPEP § 512); or
- 3. If the reply was filed via Express Mail, a submission satisfying the requirements of 37 CFR 1.10(e) including, for example, a copy of the Express Mail mailing label showing the "date-in" (see MPEP § 513).

Any petition to withdraw the holding of abandonment should be directed to OIPE.

If applicant did not previously file a complete reply within the time period set forth in the notice, applicant may file a petition to revive the application under 37 CFR 1.137.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of **UNAVOIDABLE DELAY** must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by: (1) an adequate showing of the cause of unavoidable delay; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(I); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/61.

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of **UNINTENTIONAL DELAY** must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by: (1) a statement that the entire delay was unintentional; (2) the required reply to the above-

identified Notice; (3) the petition fee set forth in 37 CFR 1.17(m); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/64.

Any questions concerning petitions to revive should be directed to the "Office of Petitions" at (571) 272-3282.

A copy of this notice <u>MUST</u> be returned with the reply.

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199

PART 2 - COPY TO BE RETURNED WITH RESPONSE

#### 1Notice of Abandonment

This application is abandoned in view principlicant's failure to timely file a proper reply to the Office notice mailed 07/06/06

#### Petition to Withdraw the Holding of Abandonment

If a complete reply to the notice was previously filed by applicant within the time period set forth in the notice, applicant may request for reconsideration of the holding of abandonment within 2 months from the mailing of this notice of abandonment by filing a petition to withdraw the holding of abandonment under 37 CFR 1.181(a). No petition fee is required. The petition must be accompanied by a true copy of the originally filed reply and the item(s) identified in one of the following:

- 1. A properly itemized date-stamped postcard receipt (see MPEP § 503);
- 2. If the originally filed reply included a certificate of mailing or transmission in compliance with 37 CFR 1.8(a), a copy of the certificate of mailing or transmission and a statement in compliance with 37 CFR 1.8(b) (see MPEP § 512); or
- 3. If the reply was filed via Express Mail, a submission satisfying the requirements of 37 CFR 1.10(e) including, for example, a copy of the Express Mail mailing label showing the "date-in" (see MPEP § 513).

Any petition to withdraw the holding of abandonment should be transmitted by facsimile directly to OIPE Customer Service at (703) 308-7751.

#### Petition to Revive an Abandoned Application

If applicant did <u>not</u> previously file a complete reply within the time period set forth in the notice, applicant may file a petition to revive the application under 37 CFR 1.137.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of UNAVOIDABLE DELAY must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by:

- 1. an adequate showing of the cause of unavoidable delay;
- 2. the required reply to the above-identified notice;
- 3. the petition fee set forth in 37 CFR 1.17(i); and
- 4. a terminal disclaimer if required by 37 CFR 1.137(d).

See MPEP § 711.03(c) and Form PTO/SB/61.

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of UNINTENTIONAL DELAY must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by:

- 1. a statement that the entire delay was unintentional;
- 2. the required reply to the above-identified notice;
- 3. the petition fee set forth in 37 CFR 1.17(m); and
- 4. a terminal disclaimer if required by 37 CFR 1.137(d).

See MPEP § 711.03(c) and Form PTO/SB/64.

Any questions concerning petitions to revive should be directed to Office of Petitions at (703) 305-9282.

Any questions regarding this notice should be directed to OIPE Customer Service at (703) 308-1202.

Customer Service Center
Initial Patent Examination Division (703) 308-1202

#### EXHIBIT B



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS FR. Dat 1450 Alexandra, Viginia 22313-1450 www.mptp.gov

CAPPLICATION NUMBER

FILING OR 371(c) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO/TITLE

10/699,597

10/30/2003

Ruxandra Draghia-Akli

108328.00161 (AVSI-0027)

**CONFIRMATION NO. 7762 WITHDRAWAL** NOTICE

JACKSON WALKER LLP 901 MAIN STREET **SUITE 6000** DALLAS, TX 75202-3797

Date Mailed: 07/06/2006

#### WITHDRAWAL OF PREVIOUSLY SENT NOTICE

The Notice mailed on 06/01/2004 was sent in error and is hereby withdrawn. A corrected Notice is enclosed. The time period for reply runs from the mail date of the corrected Notice. The Office regrets any inconvenience the error may have caused.

A copy of this notice MUST be returned with the reply.

**Customer Service Center** 

Initial Patent Examination Division (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382 **PART 3 - OFFICE COPY** 



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Viginia 22313-1450

APPLICATION NUMBER

FILING OR 371 (c) DATE

FIRST NAMED APPLICANT

ATTORNEY DOCKET NUMBER

10/699,597

10/30/2003

Ruxandra Draghia-Akli

108328.00161 (AVSI-0027)

CONFIRMATION NO. 7762
FORMALITIES
LETTER

25555 JACKSON WALKER LLP 901 MAIN STREET SUITE 6000 DALLAS, TX 75202-3797

Date Mailed: 07/06/2006

## NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Filing Date Granted

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR § 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR §§ 1.821-1.825. The application must be in sequence compliance before examination on the merits.

APPLICANT IS GIVEN ONE MONTH FROM THE DATE OF THIS LETTER WITHIN WHICH TO COMPLY WITH THE SEQUENCE RULES, 37 CFR §§ 1.821-1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR § 1.821(g). Extension of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR § 1.136. In no case may an applicant extend the period for response beyond the six-month statutory period. Direct the response to: Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

See the attachment.

#### Applicant Must Provide as part of the response:

- An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

To Download Patentin Software, visit http://www.uspto.gov/web/patents/software.htm For questions regarding compliance to these requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
- For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.
- Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov

Replies should be mailed to:

Mail Stop Missing Parts

**Commissioner for Patents** 

P.Q. Box 1450

Alexandria VA 22313-1450

A copy of this notice MUST be returned with the reply.

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 3 - OFFICE COPY

### **OIPE ROUTING SHEET**



## **APPLICATION**

IFW DocCode - SEQREQ Index using Current Date

## 10699597

# TO BE DELIVERED TO: Tech Center Scanning

## Sequence Rule Compliance Review Item

CRF, paper copy of sequence listing, and statement that both are same missing
CRF contains error(s) according to STIC Report
CRF damaged or unreadable according to STIC Report
CRF transferred from prior application is not compliant

Place an "X" in the appropriate box

DAVETRONG NGUYEN
SUPERVISORY PATENT EXAMPLES

#### **Comment Sheet**

## APPLICATION SERIAL NUMBER 10/699597

## DOES NOT COMPLY WITH THE SEQUENCE RULES. See reasons below.

Page(s) 4, line 3 and 12 and page 18, line 17 contain sequences not found in the CRF.

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RELATE	D	108328.00	085	PATENT#			OCCURRI	NG REG					FILE PUBL	10/30/2003
TYPE		UTL		STATUS	PENDING		CARDIAC	JELLS					ISSUE	
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TXT2						CIV	AIMS				EXA	MINER		
тхтз						PUI	BLICATION#				CON	NFIRM#		

BY DAP

P02065US01

ENTERED 11/3/2003 MODIFIED 6/2/2006

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ATTORNEYS

/ DAP